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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/631,933	07/31/2003	Alan F. Benner	POU920030015US1	9641	
7590 03/08/2006			EXAMINER		
Philmore H. Colburn, II Esq.			KANG, JULIANA K		
Canton Colburn			ARTIBUT	DA DED AULADED	
55 Griffin Road South			ART UNIT	PAPER NUMBER	
Bloomfield, CT 06002			. 2874		
		DATE MAILED: 03/08/2006			

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)	+			
	10/631,933	BENNER ET AL.				
Office Action Summary	Examiner	Art Unit				
	Juliana K. Kang	2874				
The MAILING DATE of this communication ap Period for Reply	pears on the cover sheet with the	correspondence address				
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period - Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailin earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 136(a). In no event, however, may a reply be ting will apply and will expire SIX (6) MONTHS from the cause the application to become ABANDONE	N. mely filed n the mailing date of this communication. ED (35 U.S.C. § 133).				
Status						
1) Responsive to communication(s) filed on 2/2/6	06 (RCE).					
2a) This action is FINAL . 2b) ⊠ This	s action is non-final.					
3) Since this application is in condition for allowa	☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under	Ex parte Quayle, 1935 C.D. 11, 4	53 O.G. 213.				
Disposition of Claims						
4)⊠ Claim(s) <u>1,3-14,20 and 21</u> is/are pending in th	e application.					
4a) Of the above claim(s) is/are withdra	wn from consideration.					
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1, 3-14, 20, 21</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/o	or election requirement.					
Application Papers						
9) The specification is objected to by the Examine	er.					
10) The drawing(s) filed on is/are: a) acc	cepted or b) objected to by the	Examiner.				
Applicant may not request that any objection to the	drawing(s) be held in abeyance. Se	e 37 CFR 1.85(a).				
Replacement drawing sheet(s) including the correct	ction is required if the drawing(s) is ob	ejected to. See 37 CFR 1.121(d).				
11)☐ The oath or declaration is objected to by the E	xaminer. Note the attached Office	Action or form PTO-152.				
Priority under 35 U.S.C. § 119						
12) ☐ Acknowledgment is made of a claim for foreign a) ☐ All b) ☐ Some * c) ☐ None of:)-(d) or (f).				
1. Certified copies of the priority documen		ion No				
2. Certified copies of the priority documen3. Copies of the certified copies of the priority	• •					
application from the International Burea	•	ca iii iiiis Malloriai Olage				
* See the attached detailed Office action for a list	` ''	ed.				
Attachment(s)						
1) Notice of References Cited (PTO-892)	4) Interview Summary					
 Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08 	Paper No(s)/Mail D	Pate Patent Application (PTO-152)				
Paper No(s)/Mail Date	6) Other:	στοπ. η φρισσασοι (π. 10-102)				
Patent and Trademode Office						

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1. The request filed on 2/2/06 for a Request for Continued Examination (RCE) under 37 CFR 1.114 is acceptable and a RCE has been established. An action on the RCE follows.

Claim Objections

2. Claim 11 is objected to because of the following informalities:

Claim 11 recites "the second major surface" in line 12. There is insufficient antecedent basis for the limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- 4. Claims 1, 5-11 and 21 are rejected under 35 U.S.C. 102(a) as being anticipated by Stricot et al (U.S. Patent 6,767,142 B2).

Stricot et al disclose an optoelectronic assembly comprising an electronic chip set (35); a substrate (32) comprising a first major surface (top surface) in communication with the electronic chip set, a second major surface (bottom surface) and an edge surface (the surface where the flexible circuit [33]) is connected; an electrical signaling medium (33, flexible circuit) having a first end in signal communication with the substrate; an optoelectronic transducer (5) in signal

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communication with a second end of the electrical signaling medium; and an optical coupling guide (8, alignment pins) for aligning an optical signal medium (10) with the optoelectronic transducer; wherein an electrical signal from the electronic chip set is communicated to the optoelectronic transducer via the substrate and the electrical signaling medium, and wherein the electronic chip set and the optoelectronic transducer share a common thermal path (4) for cooling, a heat spreader (4) having a first (27) and second surface (25), the first surface in thermal contact with the complementary device, and the second surface in thermal contact with the optoelectronic transducer, the first surface being orthogonal to the second surface, the optoelectronic transducer being mounted on the second surface (See Fig. 1). Stricot et al also disclose an integrated circuit (13) in communication with the second end of the electrical signaling medium; and a VCSEL or a PIN photodiode matrix (5) in electrical communication with the integrated circuit. Stricot et al's entire substrate including the first, second and the edge surface is in communication with the flexible printed circuit board. Stricot et al show the optical coupling guide (8) that is mounted on the second surface (25) of the heat spreader.

Claim Rejections - 35 USC § 103

- 5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
- 6. Claims 3, 4, 12, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stricot et al (U.S. Patent 6,76,142 B2).

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Regarding claims 3 and 14, Stricot et al do not specifically teach that the chi electronic chip set (complementary component, 35) comprises a processor chip, a memory chip, a signal processing chip, a switching chip or any combination thereof. Stricot et al teach using the device in an optical telecommunications. And using such chips is well known in the communication art. Thus, it would have been obvious to one having ordinary skill in the art to use such known chips in Stricot et al to process signals.

Regarding claim 4, Stricot et al do not teach that the substrate is an organic or a ceramic. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an organic or a ceramic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claim 12, Stricot et al do not teach a self or recess on the second major surface of the substrate. Using a recess or groove for coupling two components are well known in the art for the alignment purposes. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a recess in Stricot et al to make the precise alignment between the substrate and the flexible circuit.

Regarding claims 13 and 20, Since Stricot et al teach the substrate (32) having a complementary device (35) on a motherboard (see column 5 lines 1-15) in thermal contact with the second surface of the thermal spreader for the purpose of connecting device (1) to another device, placing other components such as additional

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optoelectronic transducer on the second surface of the thermal spreader would have been obvious to one having ordinary skill in the art for the purpose of processing optical signals.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hudgins et al (U.S. Patent 6,270,262 B1) and further in view of Giboney et al (U.S. Patent 6,318,909 B1).

Hudgins et al disclose an optoelectronic assembly for a computer system, comprising: an electronic chip set (46); a substrate (30b) in communication with the electronic chip set; an electrical signaling medium (101, flexible circuit board) having a first end in signal communication with the substrate; an optoelectronic transducer (60) in signal communication with a second end of the electrical signaling medium wherein an electrical signal from the electronic chip set is communicated to the optoelectronic transducer via the substrate and the electrical signaling medium (see column 4 lines 40-63); a printed circuit board (30a) in communication with a second major surface of the substrate, and wherein the electronic chip set and the optoelectronic transducer share a common thermal path for cooling (see column 4 lines 27-30 and 44-46). Hudgins et al show heat spreader (50) in thermal contact with the electronic chip set on first surface and the part of the optoelectronic transducer (70) in thermal contact with the second surface wherein the first surface being orthogonal to the second space (see Fig. 3). Hudgins et al teach coupling the optoelectronic assembly module to an optical fiber (62) however, Hudgins et al is silent about an optical coupling guide. Giboney et al teach using an optical coupling guide (a set of alignment pins) for aligning an optical fiber

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ribbon to an optoelectronic assembly for a precise alignment. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an optical coupling guide in Hudgins et al as taught by Giboney et al for optimum coupling efficiency. As described above Hudgins et al and Giboney et al teach the claimed limitations except for the flexible printed circuit board in communication with either the second major surface. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the flexible printed circuit board in communication with the second major surface to make the device more compact and it has been held that rearranging parts of an invention involves only routine skill in the art.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 3-10 and 12-14 have been considered but are moot in view of the new ground(s) of rejection. However, arguments with respect to claim 11 have been fully considered but they are not persuasive.

Applicant argues that Hudgins does not teach all three of a chip set, a substrate and a printed circuit board as recited in claim 11. But as stated above, Hudgins et al clearly teach a chip set (46), a substrate (30b) and a printed circuit board (30a)

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-

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2348. The examiner can normally be reached on Monday through Thursday 8:00 AM-2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JULIANA KANG PRIMARY EXAMINER

3/4/06